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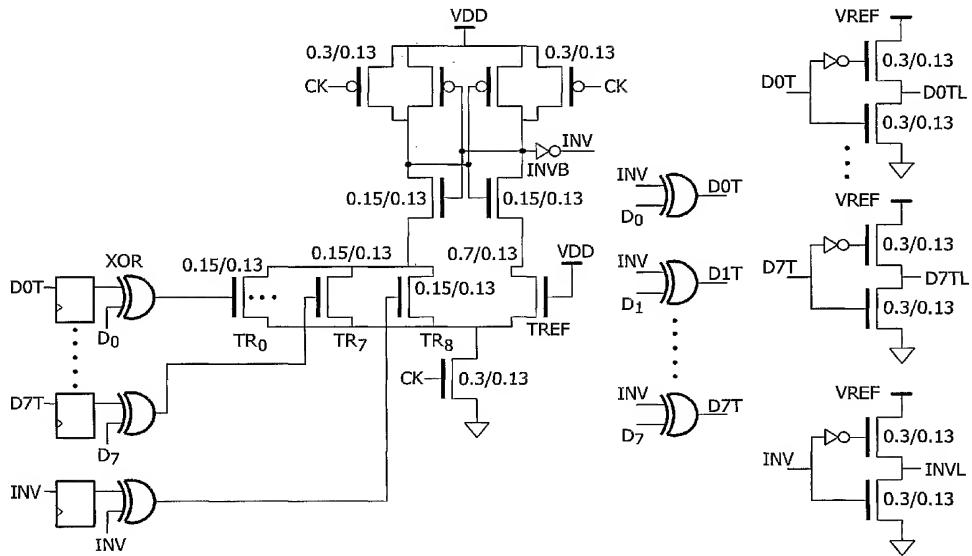
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[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR ENCODING OF LOW VOLTAGE SWING SIGNALS



(57) Abstract: An encoded-low swing scheme for transmission of a signal across an interconnect bus whereby the current values to be transmitted on the bus are compared with the previous state of the bus. When the number of bits flipping is greater than  $N$ , where  $N$  is the width of the bus, the decision to transmit the inverted signal values is made. In addition, an "invert" signal is also sent to the receiver to indicate whether the bus values are inverted or not. These encoded values are then converted into their low swing equivalents and transmitted. In this way, it can be ensured that the energy consumed over the interconnect is minimum. This strategy not only reduces the probability of transitions over the interconnect but also transmits only low swing values to achieve tremendous energy reductions relative to conventional techniques.

WO 2005/008897 A1



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